CLAIMS

What is claimed is:

1. A defect management method for an information storage medium, comprising:

writing first state information that specifies that an update cycle of a temporary defect management structure (TDMS) is open when updating of the TDMS begins, the TDMS containing information regarding temporary defect management;

updating the TDMS when data is one of written to and read from the information storage medium; and

writing second state information that specifies that the update cycle of the TDMS is closed, when the updating of the TDMS is completed.

2. The method of claim 1, wherein the first state information is written in response to a command to open the TDMS update cycle.

3. The method of claim 1, wherein the first state information is written in response to a command to one of write data on and read data from the information storage medium.

4. The method of claim 1, wherein the updating includes writing the first state information based on the updated TDMS.

5. The method of claim 1, wherein the second state information is written in response to a command to eject the information storage medium.

6. The method of claim 1, wherein the second state information is written in response to a command to close the TDMS update cycle.

7. The method of claim 1, wherein one of the first and second state information is contained in the TDMS and written during the updating of the TDMS.

8. The method of claim 1, wherein the TDMS contains temporary defect management information (TDDS) and a temporary defect list (TDFL) and one of the first and second state information is included in the TDDS.

9. A drive comprising:

a pickup that writes data on or reads data from a loaded information storage medium; and

a controller that:

controls the pickup to write first state information, which specifies that a temporary defect management structure (TDMS) update cycle is open, in an area of the information storage medium when updating of a TDMS containing information regarding temporary defect management begins;

controls the pickup to update the TDMS when data is written to or read from the information storage medium; and

controls the pickup to write second state information, which specifies that the TDMS update cycle is closed, in the area when the updating of the TDMS is completed.

10. The drive of claim 9, wherein the controller controls the pickup to write the first state information in the area, in response to a command to open the TDMS update cycle.

11. The drive of claim 9, wherein the controller controls the pickup to write the first state information in the predetermined area in response to a command to write the data or to read the data.

12. The drive of claim 9, wherein the controller controls the pickup to write the first state information in the area based on an updated TDMS when the TDMS is updated during the writing of the data to or the reading of the data from the information storage medium.

13. The drive of claim 9, wherein the controller controls the pickup to write the second state information in the area in response to a command to eject the information storage medium.

14. The drive of claim 9, wherein the controller controls the pickup to write the second state information in the area in response to a command to close the TDMS update cycle.

15. The drive of claim 9, wherein the controller writes the first or second state information to be included in the TDMS during the updating of the TDMS.

16. The drive of claim 9, wherein the TDMS contains a temporary defect management information (TDDS) and a temporary defect list (TDFL), and

wherein the controller writes the first or the second state information to be included in the TDDS.

17. The drive of claim 9, wherein the area is a temporary defect management area (TDMA) in which the TDMS is written.

18. An information storage medium that includes a lead-in area, a user data area, and a lead-out area, on which a temporary defect management structure (TDMS) containing information regarding temporary defect management and update cycle state information regarding the TDMS are written, the update cycle state information specifying whether update cycle of the TDMS is open or closed.

19. The information storage medium of claim 18, wherein the TDMS update cycle state information is contained in the TDMS.

20. The information storage medium of claim 19, wherein the TDMS contains temporary defect management information (TDDS) and a temporary defect list (TDFL) and the TDMS update cycle state information is contained in the TDDS.

21. The information storage medium of claim 18, wherein at least one TDMA is formed in at least one of the lead-in area, the user data area, and the lead-out area, and

wherein the TDMS and the TDMS update cycle state information are written in the TDMA.

22. A defect management method for an information storage medium, the method comprising:

writing first state information, which specifies that an update cycle of data is open, to an area of the information storage medium when updating of the data begins during the writing of the data to or the reading of the data from the information storage medium;

updating the predetermined data, which is generated when data is written to or read from the information storage medium, by writing the data to the information storage medium; and

writing second state information, which specifies that the update cycle of the data is closed, to the area when the updating of the information is completed.

23. The method of claim 22, wherein the first state information is written in response to a command to open the update cycle of the predetermined information.

24. The method of claim 22, wherein the first state information is written in response to a write/read command.

25. The method of claim 22, wherein the updating includes writing the first state information based on updated information during the updating of the information.

26. The method of claim 22, wherein the second state information is written in response to a command to eject the information storage medium.

27. The method of claim 22, wherein the second state information is written in response to a command to close the update cycle of the information.

28. The method of claim 22, wherein the first or second state information is contained in the information and written during the updating of the information.

29. A drive comprising:

a pickup that writes data to or reads data from a loaded information storage medium; and

a controller that:

controls the pickup to write first state information, which specifies that an update cycle of information is open, in an area of the information storage medium when updating of the information begins during the writing of the data to or the reading of the data from the information storage medium;

controls the pickup to update the predetermined data, which is generated when data is one of written to and reading data from the information storage medium, by writing the information on the information storage medium; and

controls the pickup to write second state information, which specifies that the update cycle of the information is closed, in the area when the updating of the information is completed.

30. The drive of claim 29, wherein the controller controls the pickup to write first state information in response to a command to open the update cycle of the information.

31. The drive of claim 29, wherein the controller controls the pickup to write the first state information in response to a command to write the data or to read the data.

32. The drive of claim 29, wherein the controller controls the pickup to write the first state information based on updated information when the information is updated during the writing of the data to or the reading of the data from the information storage medium.

33. The drive of claim 29, wherein the controller controls the pickup to write the second state information in response to a command to eject the information storage medium.

34. The drive of claim 29, wherein the controller controls the pickup to write the second state information in response to a command to close the update cycle of the information.

35. The drive of claim 29, wherein the controller controls the pickup to write one of the first and second state information to be included in the information during the updating of the information.

36. An information storage medium comprising:

information related to and generated during one of writing of data and reading of written data; and

update cycle state information that specifies whether an update cycle of the information is open or closed, and is written based on the information.

37. The information storage medium of claim 36, wherein the update cycle state information is contained in the information and written during updating of the information.

38. The information storage medium of claim 36, wherein the information is information regarding defect management that is created during the writing of the data to or the reading of the data from the information storage medium.

39. The information storage medium of claim 36, wherein the information storage medium is a write once information storage medium or a rewritable information storage medium.

40. A method of determining whether recording of data was abnormally terminated on an information storage medium due to an abnormal event, comprising:

reading second state information that specifies that an update cycle of the TDMS is closed, when updating of the TDMS is completed,

wherein first state information that specifies that an update cycle of a temporary defect management structure (TDMS) is open is written when the updating of the TDMS begins, the TDMS containing information regarding temporary defect management, and

wherein the TDMS is updated when data is written to or read from the information storage medium.

41. The method of claim 40, wherein the information storage medium is a write once information storage medium or a rewritable information storage medium